Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–V EXAMINATION – WINTER 2015

Subject Code: 150702 **Date:17/12/2015**

Subject Name: Computer Network

Time: 10:30am to 1:00pm **Total Marks: 70**

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1	**(a)**	Enlist seven layers of OSI reference model. Discuss advantages of layered approach?	**07**
	(b)	Give differences between connection oriented and connectionless services.	**07**
Q.2	**(a)**	Explain following network topologies with advantages and disadvantages. 1. Bus 2. Star 3. Ring 4. Mesh	**07**
	(b)	What is the difference between guided and unguided transmission media? Write briefly about twisted pair.	**07**
		OR	
	(b)	Write a short note on fiber optic cable.	**07**
Q.3	**(a)**	What do you mean by framing? List various framing techniques and explain any two of them.	**07**
	(b)	Write a short note on sliding window protocols.	**07**
		OR	
Q.3	**(a)**	What is error control? Explain CRC with example	**07**
	(b)	Explain following - Piggy backing - Selective Repeat and Go back N	**07**
Q.4	**(a)**	Explain various versions of CSMA protocols.	**07**
	(b)	Explain shortest path routing with suitable example.	**07**
		OR	
Q.4	**(a)**	Apply binary, Manchester and differential Manchester encoding on following bit pattern 10110111	**07**
	(b)	Explain distance vector routing mechanism with example.	**07**
Q.5	**(a)**	Explain the concept of congestion control with example.	**07**
	(b)	Write a note on HTTP.	**07**
		OR	
Q.5	**(a)**	Draw and explain TCP packet header.	**07**
	(b)	What is the need of Domain name service? Explain DNS architecture.	**07**

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